What is the Construction Industry?

An Economic Fact Book

THE HARRY VAN ARSDALE JR. CENTER FOR LABOR STUDIES
EMPIRE STATE COLLEGE/SUNY

Introduction & Acknowledgements

The purpose of this fact book is to present a basic economic overview of the contemporary construction industry and the people who work in it.

We live and work in the shadows of skyscrapers and make our way through streets shaped by multistoried apartment buildings, small shops, abandoned factories, houses and brownstones. Our breath may be taken away by the majesty of a building or we might be awed by the intricate patterns of brick, steel and cables we see around us. But usually we continue on our way, quite oblivious to the vast industry responsible for shaping the environments in which we live and work.

This fact book has been developed for workers and students in the construction industry, as well as for any of the general public who might be curious about this dynamic segment of our economy – a trillion dollar industry nationally, employing over 6 million people.

This fact book began as a project of the Research Methods: Labor Strategy and Structure, Spring 2006 class at The Harry Van Arsdale Jr. Center for Labor Studies in New York City. Thank you to all my students whose hard work began shaping this project. Updating and expanding the fact book will be an on-going student endeavor.

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Thank you to Michael Merrill, Dean at Van Arsdale, for his advisory assistance, to Moshe Adler for his contributions as noted in the Fact Book, and to Howard Saunders for his graphics.

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What is the Construction Industry?

The construction industry is traditionally divided into three sub-sectors. They are: 1) the construction of buildings; 2) road, highway, and other "infrastructure" construction; and 3) specialty trades. It thus encompasses all the businesses that build either houses and office buildings or highways and bridges, as well as those who do the specialized work of electricians, plumbers and masons, who are typically involved in the construction of all kinds of structures.

The construction industry is a significant part of our economy, employing over 8 percent of all wage earners. Of the 14 industry-categories used below, construction ranked sixth in the percentage of the total workers it employed in 2006.

Table 1: Employment by Industry: Percent of Total Employed

INDUSTRY	**2000**	**2006**
Education & Health Services	19.1	20.7
Retail Trade	11.5	11.6
Manufacturing	14.4	11.3
Professional & Business Services	10	10.3
Leisure & Hospitality	8.2	8.4
CONSTRUCTION	**7.3**	**8.1**
Financial activities	6.8	7.3
Transportation & Utilities	5.4	5.2
Other	4.5	4.9
Government workers	4.5	4.5
Wholesale trade	3.1	3.2
Information	3.0	2.5
Agriculture	1.8	1.5
Mining	.3	.5

Source: U.S. Census Bureau, *Statistical Abstract of the U.S. 2007*, Table 606 for 2000 data. Bureau of Labor Statistics, Household Data Annual Averages, Table 17. Employed persons by industry, sex, race and occupation, for 2006 data.

How Large is the Public Sector Construction Industry?

The annual total value of U.S. construction "put in place" is over a trillion dollars -- $1,176.6 billion. Of this, almost 76 percent is in the private sector and 24 percent in the public sector – state, local and federal.

In the private sector, residential construction makes up 61 percent of all projects, while office and commercial construction account for only 15 percent.

Table 2: Value of Private Sector Construction (in millions of dollars)

	May 2007	Percent
TOTAL PRIVATE CONSTRUCTION	**$892,114**	**100%**
Residential	***548,989***	***62***
Non Residential	***343,125***	***38***
Commercial	*81,674*	*9*
Office	*51,979*	*6*
Manufacturing	*38,215*	*4*
Power	*37,553*	*4*
Health care	*36,951*	*4*
Lodging	*27,770*	*3*
Communication	*26,385*	*3*
Educational	*15,711*	*2*
Religious	*7,656*	*1*
Amusement & recreation	*9,090*	*1*
Transportation	*8,303*	*1*

Source: U.S. Census Bureau Construction Spending, www.census.gov/const/www/c30index.html

In the public sector, educational facilities represent 28 percent of all publicly-funded construction, followed by highway and street construction at 27 percent.

Table 3: Value of Public Sector Construction (millions of dollars)

	May 2007	Percent
TOTAL PUBLIC CONSTRUCTION	**284,456**	**100%**
Residential	***7,030***	***3***
Non Residential	***277,426***	***98***
Educational	*79,667*	*28*
Highway and street	*76,428*	*27*
Sewage & waste disposal	*23,969*	*8*
Transportation	*21,255*	*8*
Water supply	*15,441*	*5*
Power	*12,111*	*4*
Amusement & recreation	*11,084*	*4*
Office	*9,371*	*3*
Public safety	*9,117*	*3*
Health care	*8,892*	*3*
Conservation & development	*5,268*	*2*
Commercial	*3,464*	*1*

Source: U.S. Census Bureau Construction Spending, www.census.gov/const/www/c30index.html

Wages in the Construction Industry

In general, unionization has a significant impact on the pay and benefits of union members. As Table 4 shows, while there is a significant "union premium" in both wages and benefits, the union advantage is greatest for benefits. Union members receive health, education, vacation, and retirement benefits that are significantly greater than those non-union workers receive. According to the most recent data, in 2007, union members had median weekly earnings of $863 while those not represented by unions had median weekly earnings of $663.[1]

Table 4: The Union Hourly Wage and Benefit Premium, 2005

All Workers:	**Wages**	**Insurance**	**Pension**	**Compensation**
Union	$24.10	3.63	$2.39	$33.17
Non-union	$18.81	$1.54	$0.72	$23.09
Union Premium:				
Dollars	$5.29	$2.09	$1.67	$10.08
Percent	28	136	232	44

Source: L. Mishel, J. Bernstein, S. Allegretto, *The State of Working American 2006/2007*, The Economic Policy Institute, Cornell Press, 2007, Table 3.33.

The union premium in the construction industry is also quite significant. The union advantage in all the selected occupations shown in Table 5 is greater than fifty percent.

Table 5: Average Hourly Pay and Yearly Earnings for Selected Construction Occupations, Union and Non-Union, 2006

Occupation	**Union Hourly Wage**	**Union Yearly Earnings**	**Nonunion Hourly Wage**	**Nonunion Annual Earnings**	**Union Advantage**
Carpenters	$26.41	$54,933	$14.68	$30,534	80%
Electricians	$26.68	$55,494	$17.61	$36,629	52%
Construction Laborers	$22.57	$46,946	$12.60	$26,208	79%
Roofers	$20.54	$42,723	$12.76	$26,541	61%
Pipelayers, Plumbers, Steamfitters, Pipefitters	$26.56	$55,245	$16.77	$34,882	58%
Painters	$21.50	$44,720	$12.41	$25,813	73%
Sheet Metal Workers	$24.99	$51,979	$16.25	$33,800	54%
Cement Masons, etc.	$24.90	$51,790	$14.72	$30,618	69%
Brick and Stone masons	$21.98	$45,718	$13.62	$28,330	61%
Drywall Installers, Ceiling Tile Installers, Tapers	$23.70	$49,296	$12.89	$26,811	84%

Source: Barry T. Hirsch and David A. MacPherson, *Union Membership and Earnings Data Book*, BNA, 2007, forthcoming; U.S. Census Bureau, Preliminary Estimates of Weighted Average Poverty Thresholds for 2006, January 24, 2007. From: www.afl.cio.org/joinaunion/why/uniondifference/uniondiff17.

[1] Bureau of Labor Statistics, *Union Members in 2007*, [25 Jan 2008], http://bls.gov/news release/pdf/union2.pdf, Tbl 2.

In New York City Region construction trades workers can earn from $16,000 to over $50,000 per year when they enter the industry, and from $30,000 to over $80,000 as they become more experienced workers.[2]

Table 6: Wages for NYC Region Construction Occupations, 2nd Quarter 2007*

	Employment	Mean	Entry Annual Wages	Experienced Annual Wages
First –line Supervisors/Mangers	8,870	$85,790	$55,510	$100,920
Structural Iron & Steel Workers	1,270	$74,870	$38,420	$93,090
Operating Engineers & Other Construction Equipment Operators	2,360	$80,200	$55,130	$92,740
Electricians	17,390	$70,170	$41,420	$84,540
Plumbers, Pipefitters, Steamfitters	11,070	$63,140	$36,260	$76,580
Reinforcing Iron and Rebar Workers	n/a	$74,710	$51,720	$86,200
Drywall and Ceiling Tile Installers	1,550	$60,730	$37,390	$72,400
Plasterers and Stucco Masons	610	$55,310	$38,590	$63,670
Helpers -- Brick & Stone masons, Tile & Marble Setters	600	$50,230	$22,520	$64,090
Sheet Metal Workers	2,330	$63,110	$32,350	$78,490
Brickmasons and Blockmasons	2,140	$57,200	$38,620	$66,490
Carpet Installers	n/a	$59,870	$31,850	$73,880
Tile and Marble Setters	1,100	$59,380	$33,310	$72,420
Stonemasons	n/a	$54,040	$30,500	$65,810
Carpenters	14,160	$58,270	$33,310	$70,740
Painters, Construction & Maintenance	5,240	$52,460	$27,830	$64,770
Construction Laborers	13,180	$50,690	$26,070	$63,010
Roofers	1,340	$48,990	$26,510	$60,230
Glaziers	n/a	$41,010	$21,600	$50,710
Pipelayers	n/a	$44,350	$26,800	$53,120
Helpers - Electrician	1,460	$36,380	$25,560	$41,790
Helpers – Pipelayers ,Plumbers, Pipefitters, Steamfitters	1,670	$33,290	$20,860	$39,500
Helpers – Painters, Paperhangers, Plasterers, Stucco Masons	n/a	$28,620	$19,620	$33,130
Helpers – Carpenters	1,760	$27,980	$18,150	$32,900

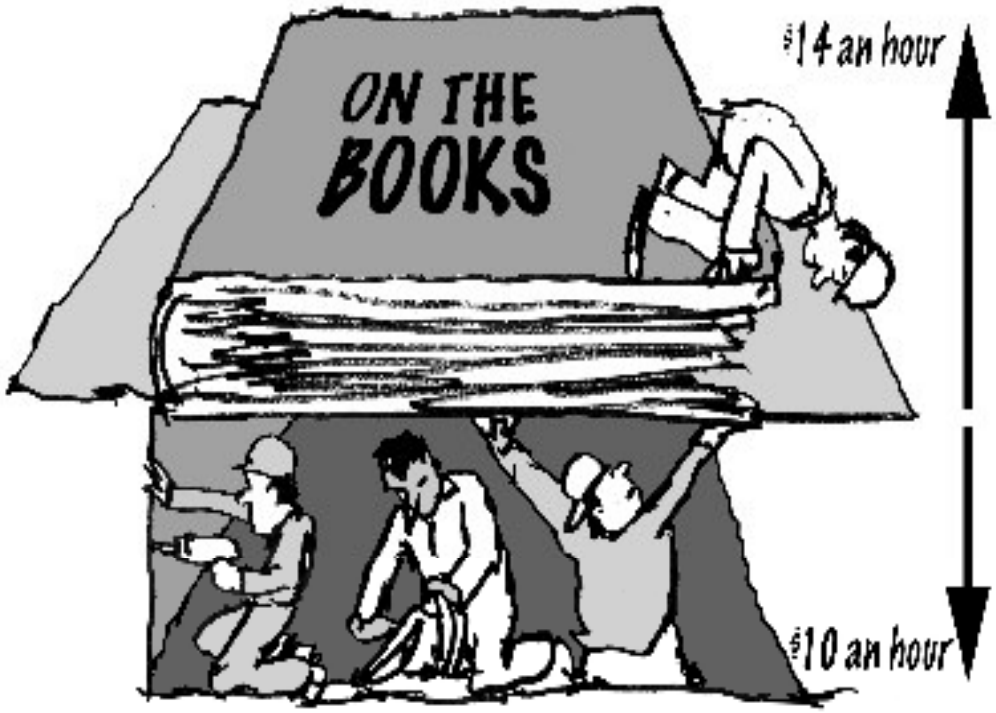
*Wage data are from the 2003 -2006 OES Survey and have been adjusted to second quarter 2007 by making cost-of-living adjustments, reflecting NYS minimum wage of $7.15. NYC Region includes Bronx, Kings, NY, Queens and Richmond counties. Source: www.labor.state.ny.us/workforceindsutrydata/wages_pr.asp?r

[2] Entry wage is the mean (average) wage of the bottom third of wages in an occupation. Experienced wage is the mean (average) wage of the top two-thirds of wages in an occupation.

Electricians and plumbers earn some of the highest wages in the trades, not only because they are the most unionized, but also because these occupations require either an apprenticeship system (for electricians) or a license (for plumbers) to practice. The apprenticeship program established for non-residential electricians includes career ladders with corresponding pay increases such that entry-level electricians earn over $40,000 on entering the trade and experienced electricians can earn over $80,000 per year.

In contrast, a growing number of construction workers in the New York City residential sector are working off the books, receiving low wages and no union benefits or protection. It is estimated that one-fifth of the 82,000 residential workers in the city work off the books. These workers average $10 an hour, or about $18,400 a year, compared with unionized workers in the same sector who earn $24.70 per hour on average, or about $45,448 a year and receive good health and pension benefits. Non-union workers who work on the books earn about $14 per hour, or about $27,760 per year.

The practice of hiring off the books is increasing due to a growth in construction work and a supply of illegal immigrants willing to do the work for the lower wages, as well as lack of unionization in the residential sector.[3]



[3] *The Underground Economy in the New York City Affordable Housing Construction Industry*, A Fiscal Policy Institute Report, April 17, 2007. www.fiscalpolicy.org

Upstate and Downstate: Two Labor Markets?

It is often argued that New York is divided economically between Upstate and Downstate. But a comparison of wages and unionization rates suggests that this is not so.

Table 7 compares wages and unionization rates in Downstate (New York City with its five boroughs, together with Suffolk, Nassau, Westchester and Rockland counties) and Upstate Counties. Somewhat surprisingly, except for supervisors and plumbers, none of the differences between the mean wages is statistically significant at the 10 percent level of confidence.[4]

Also, union density rates in the construction trades are 34 percent in Downstate and 36 percent in Upstate, a small difference which is not statistically significant.

It therefore seems that at least for the construction, there is little difference between Upstate and Downstate New York labor markets. To be sure, for some occupations wages are higher in the downstate market, but this is not generally the case.

Table 7: Upstate and Downstate New York State Wages, 2006

		N	Mean	Median
First Line Supervisors	Downstate	16,198	$ 27.16	$ 24.24
	Upstate	9,451	$ 23.67	$ 20.26
Carpenters	Downstate	37,148	$ 19.73	$ 15.81
	Upstate	22,231	$ 19.27	$ 16.86
Construction Laborers	Downstate	53,928	$ 15.84	$ 12.70
	Upstate	16,409	$ 17.05	$ 14.73
Electrician	Downstate	28,190	$ 23.33	$ 20.46
	Upstate	12,839	$ 23.71	$ 20.00
Pipelayers, plumbers, etc.*	Downstate	18,074	$ 22.69	$ 20.25
	Upstate	10,209	$ 18.30	$ 16.00
Other	Downstate	78,008	$ 19.86	$ 16.00
	Upstate	54,251	$ 18.55	$ 17.39
Total	Downstate	231,546	$ 20.06	$ 16.00
	Upstate	125,391	$ 19.38	$ 17.56
		356,937		

Source: CPS 2004-2006 ORG

* Statistically significant difference between means (10% level). Significance test of the un-weighted data.

[4] Data for this section was provided by Moshe Adler, Instructor at the Harry Van Arsdale Jr. Center for Labor Studies, NYC.

Who Works in the Construction Industry?

In general, as Tables 8 and 9 document, the construction industry is becoming somewhat older and better educated. It is also finding a place for more African Americans, Hispanics, Asians and others. The industry continues to remain male-dominated, with the percentage of women remaining fairly constant over the last seventeen years.

Race and National Identity in the Construction Industry

African Americans and Hispanics are represented in virtually all of the construction occupations. However, as we shall see below, they are underrepresented in several of the highest paying occupations.

Table 8: Ethnic Groups in the Construction Industry (percent distribution)

	1977	1989	2006
White	91.4	90.5	90.3
African American	6.6	6.5	5.5
Asian	-	-	1.4
Other	1.9	2.9	2.8

Source: 1977 data from Steven Allen, "Developments in Collective Bargaining in Construction in the 1980s and 1990s," Table 1. 2006 data from Bureau of Labor Statistics, Characteristics of the Employed Table 14 and 18, www.bls.gov/cps.

In the more detailed breakdown below, other differences emerge. African Americans represent a larger proportion of cement masons, etc., (almost 14 percent), highway maintenance (almost 11 percent) and construction and building inspectors (a little over 10 percent). Hispanic workers also have a strong presence among concrete masons, etc., (almost 52 percent), drywall and ceiling tile installers (51.5 percent), roofers (46.7 percent), laborers (44.7 percent), helpers (43.2 percent), and painters (41 percent).[5]

According to a recent report by the Pew Hispanic Center, the construction industry continues to be a significant source of jobs for Hispanic workers, particularly in the South and West. Employment in the industry grew by 559,000 workers in 2006 with nearly two thirds of the new workers being Hispanic and mostly foreign born. Today, Hispanics represent about a quarter of all construction workers and those who arrived after 2000 represent a little over 7 percent of all construction workers.[6]

[5] The statistics on Hispanic workers must be interpreted with caution. The "Hispanic" or "Latino" national data category includes white and black workers with Hispanic/Latino backgrounds. Workers in the "Hispanic" category may already be included in the white or black category, therefore inflating the Hispanic category. However, the percentages in the tables can provide some insight into the extent of Hispanic workers in the construction industry as a whole. .

[6] "Construction Jobs Expand for Latinos Despite Slump in Housing Market," Pew Hispanic Center, March 7, 2007.

Table 9: Percent of Total Workers in Construction Occupations in 2006 by Ethnicity and Gender

	Women	African American	Asian	Hispanic or Latino
First line supervisors/managers	2.6	4.6	1.3	12
Brick- stonemasons	1.6	7.1	.1	40
Carpenters	2.4	4.5	1.6	26.6
Carpet, floor & tile installers/finishers	2.4	5.3	1.2	39.4
Cement masons, etc.	.7	13.8	-	51.5
Construction laborers	3.7	7.5	1.4	44.7
Operating engineers	1.7	8.3	.3	9.7
Drywall & ceiling tile installers	2.9	3.8	.1	51.8
Electricians	1.9	7.5	1.7	14.4
Painters, construction & maintenance	7.7	7	1.2	41
Pipelayers, plumbers, etc.	1.8	8.5	.4	20.9
Roofers	1.1	7	1.2	46.7
Sheet metal workers	3.1	2.2	2.8	13.7
Structural iron & steel workers	2.2	2.6	.6	15.5
Helpers	6.2	9.9	.4	43.2
Construction & building inspectors	8.8	10.1	1.3	12.3
Highway maintenance	3.8	10.5	.6	23.1

Source: Bureau of Labor Statistics, Characteristics of the Employed, Table 11, www.bls.gov/cps

It is also instructive to look more closely at the race and national origin differences among construction workers in New York City. Fifty-three percent of the construction workforce in NYC is African, Hispanic, Asian, or "other," but there are significant differences across the trades.[7]

Table 10: Race and Ethnicity of NYC Construction Trades (percent distribution)

Occupation	White	Black	Asian	Hispanic	Other
First Line supervisors	53.7	16	7.7	18.3	4
Brick and stone masons	36.8	30.3	7.7	19.3	5.8
Carpenters	40.9	21.4	6.9	25.3	5.5
Carpet, floor & tile installers	34.4	19.5	3.8	38.7	3.6
Cement masons, etc.	58.2	24.4	0	14.9	2.6
Construction Laborers	23.6	21.2	9.2	41	5.1
Drywall Installers	20.4	33.3	1.2	37.3	7.8
Electricians	49.2	24	4.8	18.8	3
Glaziers	44.3	9.3	1.4	33	12
Insulation workers	36.1	13.9	-	36.1	13.9
Painters, construction & maintenance	33.4	13.4	7.8	40.8	4.7
Pipelayers, plumbers, etc.	45.9	25.8	2.5	22	3.9
Plasters & stucco masons	36.6	23.3	2.6	31.6	5.9
Roofers	38.7	21.8	5.3	28.7	5.5
Sheet metal workers	36.4	23.9	1	34.7	3.9
Iron & steel workers	39.3	30.9	4.6	20.1	5.1
Construction helpers	27.9	17.4	4.4	43.7	6.5

Source: US Census Bureau, Census 2000 special tabulation, Labor Force by Federal EEO Occupational Group. www.labor.state.ny.us/workforceindustrydata/eeo

[7] Again, these figures need to be treated with caution. See note 5 above.

Gender in the Construction Industry

Since 1978, women's participation in the craft and skilled trades has increased from 7 percent to almost 10 percent. However, all of this gain occurred before 1989. Since then, the proportion of women in construction has remained constant.

Table 11: Gender in the Construction Industry (percent distribution)

	1977-78	1989	2006
Men	93%	90.4%	90.4%
Women	7%	9.6%	**9.6%**

Source: 2006 data from www.censtats.census.gov, Table 18.

If we break out the 9.6 percentage figure, however, we also see that more than three-quarters of women in the construction industry (77 percent) are clustered in the administrative, financial, and sales positions, while fewer than 20 percent of women in the industry are craft workers**.**

Table 12: Occupational Distribution of Women in the Construction Industry 2006 (percent distribution)

Occupation	Percent Women
Office and administrative support occupations	49
Management, business and financial operations	23
Construction & extraction	20
Professional and related occupations	3
Sales and related occupations	2
Installation, maintenance and repair	1
Other	2

Source: www.bls.gov, Household Data Annual Averages, Table 17: Employed persons by industry, race and occupation.

The same gender pattern prevails in New York City as shown in the table below.

Table 13: Gender in NYC Construction Industry (percent distribution)

Male	Female
97%	2.9%

Source: U.S. Census Bureau, Census 2000 for Construction & Extractive Craft Workers.
www.labor.state.ny.us/workforceindustry

Education in the Construction Industry

The education level has also started to rise in the 80s. The most significant change has been in the "some college" category. In 1977, about 15 per cent of the industry had some college; in the eighties this increased to 17 percent, and today over 23 percent of workers in the construction industry have some college.[8] Overall, workers in the construction industry are approaching the "some college" category of the civilian labor force.

Table 14: Years of Schooling of Construction Workers (percent distribution)

	High School and Less	Some College	Bachelor's Degree or More
1977-78	78.9	14.7	6.4
1989	74.9	17	8
2004	68.5	23.3	8.2*
2004 civilian labor force	42.2	27.5	32.3

Source: 2004 figures from U.S. Department of Labor, Postsecondary-education or Training Category Report, http://data.bls.gov/oep/servlet/oep.noeted.servlet.ActionServlet?Action, and are calculated based on the educational attainment of 15 occupational categories. 1977 and 1989 figures from Steven G. Allen, "Developments in Collective Bargaining in Construction in the 1980s and 1990s," in Paula Voos (ed.), *Contemporary Collective Bargaining in the Private Sector*, Industrial Relations Research Association, 1994, pp.411-445.

If we look at the educational level of selected crafts in 2004, we see again that the "some college" category level of education is strong.

Table 15: Percent of Workers by Level of Education
Selected Construction Industry Occupations 2004

	High school or less	Some College	Bachelor's degree or higher
First line supervisors/managers	65%	25%	10%
Electricians	51	43	6
Construction and related workers	75	20	5
Carpenters	73	21	6
Pipelayers	67	28	6
Roofers	88	10	3
Plumbers, pipefitters, steamfitters	67	28	6

Source: U.S. Department of Labor, Postsecondary-education or Training Category Report, http://data.bls.gov/oep/servlet/oep.noeted.servlet.ActionServlet?Action

[8] The 2004 data was calculated using all the occupations available that are associated with the construction industry.

Estimates of the educational attainment of construction workers in New York State are very similar to these national averages.

Table 16: New York State Construction Worker Educational Attainment

	Less Than HS	HS Diploma Or GED	Some College But No Degree	Applied Associate Degree	Academic Associate Degree	BA/BS Degree	MA/MS Degree
First Line Supervisors	16%	47%	15%	6%	5%	8%	2%
Carpenters	20%	47%	12%	2%	5%	10%	4%
Construction Laborers	36%	36%	11%	4%	2%	7%	2%
Electricians	3%	49%	22%	10%	9%	7%	0%
Pipelayers, plumbers, pipefitters, steamfitters	16%	45%	17%	15%	6%	1%	0%
Other	19%	50%	15%	4%	3%	7%	2%
Total	**20%**	**46%**	**15%**	**5%**	**4%**	**7%**	**2%**

Source: CPS 2004-2006.

Age in the Construction Industry

Finally, how old is the typical construction worker? The construction workforce is clustered in the 25-54 year old range. Today, there are fewer young workers overall – most likely reflecting the fact that more younger workers are completing high school and securing some level of higher education (as shown in the education table above).

Table 17: Age of Construction Workers (percent distribution)

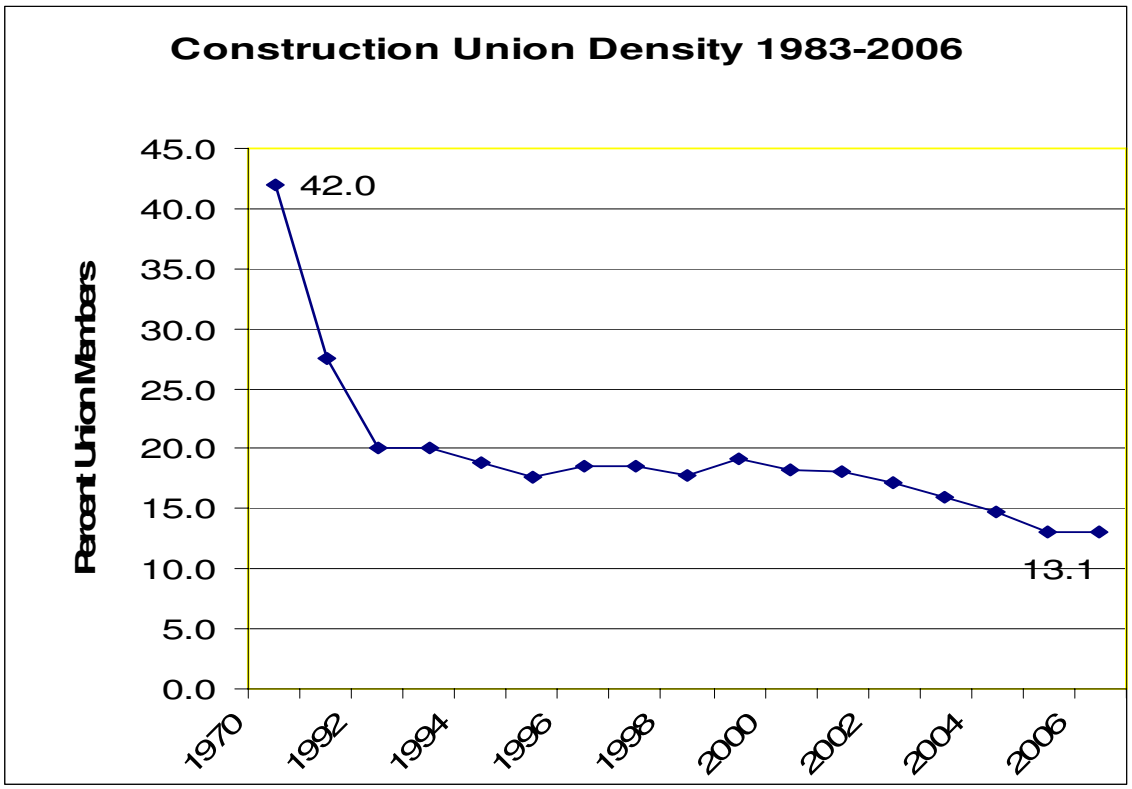
	1977-78	1989	2006
Under 20	6.7	5.2	2.7
20-24	16.6	13.8	10.5
25-54	63.4	71.4	74.7
55+	13.3	9.6	12

Source: 1977 and 1989 data for all the tables in this section are from Steven G. Allen, "Developments in Collective Bargaining in Construction in the 1980s and 1990s." 2006 data from www.censtats.census.gov, Table 14.

Union Membership in the Construction Industry

In the Economy as a Whole. Union membership has declined significantly from a high of 36 percent in 1953 when more than one in three private sector workers were union members. In 2007, there are 15.7 million union members in the United States (private and public sector), representing a little over 12 percent of the workforce. However, there are significant differences between unionization rates in the private and public sectors. Only 7.5 percent of private sector workers are union members, whereas 35.9 percent of public sector workers belong to a union.[9]

In the Construction Industry. Although union membership in the construction industry remains higher than overall private sector union membership, it is at an all time low of 13 percent. As a point of reference, in 1970, 42 percent of construction workers were union members.[10]



Source: www.bls.gov for 2004, 2005, 2006. Statistical Abstracts, www.census.gov/compendia/statab for previous years, Table 689 Union Members by selected Characteristics. 1970 data from Allen, "Developments in Collective Bargaining," p. 426.

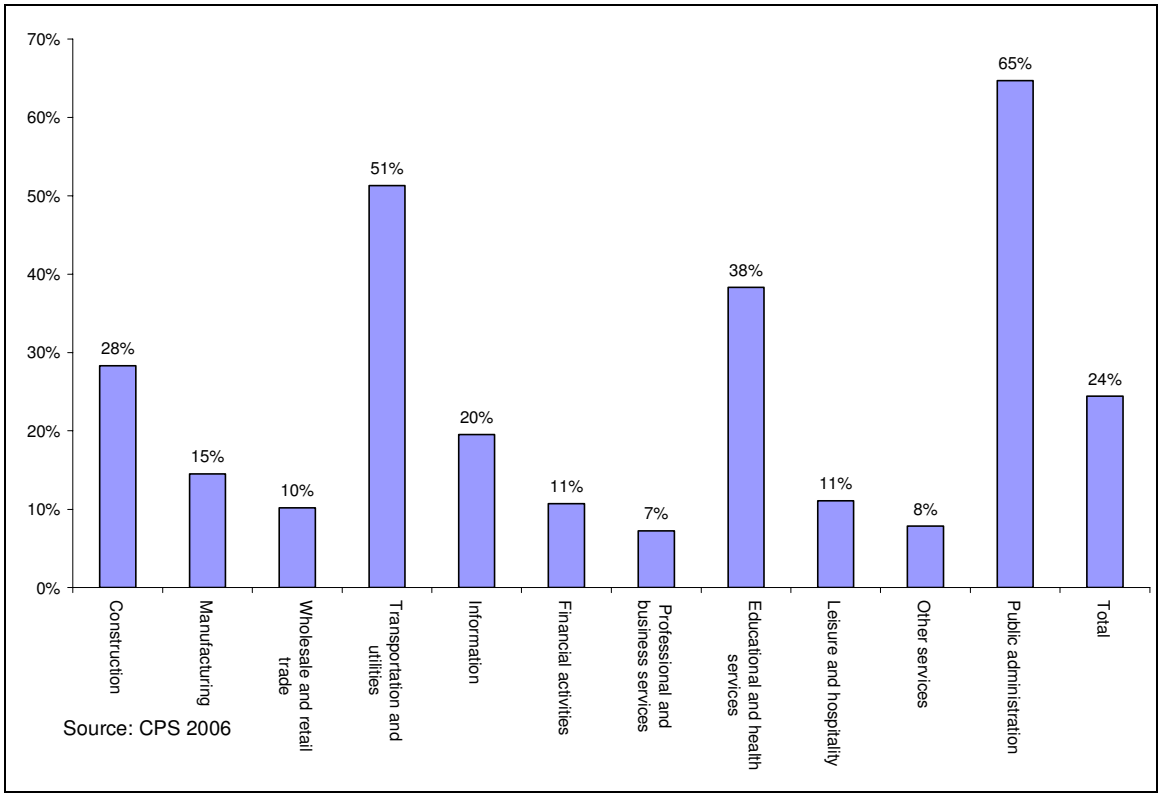
In the 1950s and 60s most construction activity was performed by unionized workers. It fell sharply after that for a variety of reasons, including the coordinated corporate anti-union campaign by the Business Roundtable in 1969 (called the Construction Users Anti-Inflation Roundtable), a regulatory and legal environment that severely limited the use of

[9] Bureau of Labor Statistics, *Union Members in 2007* [25 January 2008], Table 2.
[10] Stephen Allen, "Developments in Collective Bargaining," p.426.

powerful union pressure tactics such as secondary boycotts and sympathy strikes, and the unions' own failure to organize workers in the rapidly expanding residential sector.[11]

The bar graph below compares unionization rates across selected trades in New York State. At 28 percent, the rate of unionization in the construction industry is well below the rate of unionization among government employees, transportation and utility workers and educational and health services workers. At the same time construction workers are more likely to be unionized than workers in manufacturing or in the wholesale and retail industries.[12]

New York State Unionization Rates by Industry



What explains these differences? The role of the government in each of these industries probably holds the key. Unlike some private employers, the government does not interfere with the rights of its own workers to organize. Furthermore, it also often demands lawful behavior of its contractors. This is probably the reason that the rate of unionization is higher among government workers as well as among workers in the utilities industries. As was shown the government is also an important client of the construction industry, and this is perhaps why the rate of unionization in construction is in the middle range. Workers in the retail and wholesale industry, on the other hand,

[11] Mark Erlich and Jeff Grabelsky, "Standing at a Crossroads: The Building Trades in the Twenty-First Century. *Labor History*, Vol. 46 No. 4, November 2005, pp 421-445 and Steven G. Allen, "Declining Unionization in Construction: The Facts and The Reasons." *Industrial & Labor Relations Review*: Apr. 1988, Vol. 41, No. 3.
[12] New York State Unionization Rates by Industry provided by Moshe Adler.

typically have to fend for themselves when they try to organize, and this is perhaps why their rate of unionization is so much lower.

Represented Unions. Almost all unionized workers in the construction industry are represented by one of the eleven national unions in the Building and Trades Department of the AFL-CIO. Membership in these unions has changed considerably over the years as Table 18 below reveals.

Table 18: Union Membership in the Building and Construction Trades Dept., AFL-CIO (in thousands of members)

	1955	1995	2005
Asbestos Workers	9	12	18
Boilermakers	151	42	41
Bricklayers	120	84	94
Carpenters**	750	378	520
IBEW	460	670	630
Iron workers	133	82	84
Laborers**			
Operating Engineers**			
Painters	182	95	89
Plasterers and Cement Masons	60	29	30
Plumbers & Pipefitters	200	220	220
Roofers	97	21	19
Sheet Metal Workers	50	106	93
Teamsters		1276*	1288

Source: Executive Council Report, AFL-CIO 2005.
* This count is from 1997. ** Disaffiliated from the AFL-CIO in 3/01 and joined Change to Win.

Health and Safety in the Construction Industry

The construction industry is a very dangerous industry in which to work. In 2005, the construction industry, compared with all other private industries, had the highest number of fatal injuries -- 1,186. Transportation and warehousing had the second highest number of fatal injuries with 881.[13]

Table 19: Number of Fatal Injuries in the Construction Industry

1998	1,171	**2005**	1,186

Source: See footnote 13.

With 414,900 nonfatal workplace injuries and workplace illnesses, the rate of injuries and illnesses in the construction sector in 2005 was 6.3 cases per 100 full-time workers.[14] This is 37 percent higher than the 4.6 cases per 100 workers in all private industry.

Specialty trade contractors, including electricians, plumbers, masons, roofers, had the most injuries and illnesses of the three sub-sectors in construction -- construction of buildings and heavy and civil engineering construction.

Construction Fatalities in New York City

Fatal construction accidents in New York City have increased significantly. Fatalities from construction accidents in New York City have reached a five-year high -- in 2000 there were 16 fatalities; in 2002 there were 25; and in 2006 there were 31 fatalities. In 2006 many of the dead workers were Hispanic immigrants who worked for small contractors (10 or fewer workers) in nonunion jobs. Falls from hanging scaffolds are the leading cause of the increase in accidents.[15]

Table 20: Construction Worker Deaths in New York City

2000	16	**2002**	25	**2006**	31

Source: See footnote 13.

Table 21: Construction Accidents by Cause: Jan 1 through Nov. 1 2006

Worker fell	51 %
Material fell	26 %
Equipment	8 %
Excavation work	6 %
Other	9 %

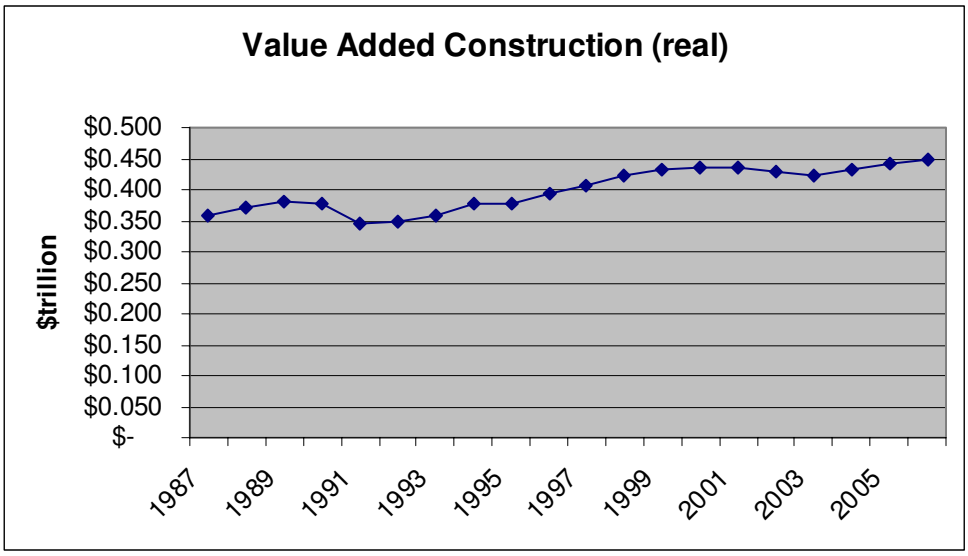
Source: See footnote 13.

[13] Bureau of Labor Statistics, Current Population Survey, Census of Fatal Occupational Injuries, and US Department of Defense 2005. 1998 figure from *Statistical Abstracts*, Fatal Occupational Injuries and Events: 1998, No. 710.
[14] Bureau of Labor Statistics, *News*, Workplace Injuries and Illnesses in 2005, October 19, 2006.
[15] Sewell Chan, "Fatal Construction Accidents in the City Rise Sharply," *The New York Times*, Nov. 22, 2006. Brian Kates, "Fatal gaps in the safety system," *Daily News*, May 27, 2007.

The Construction Industry's Role in the U. S. Economy

The construction industry contributes significantly to the wealth of our economy, as measured by the Gross Domestic Product (GDP).[16] The GDP of the United States has seen impressive growth since 1989 when it stood at about $650 billion, nearly doubling in size to reach almost $12 trillion in 2006

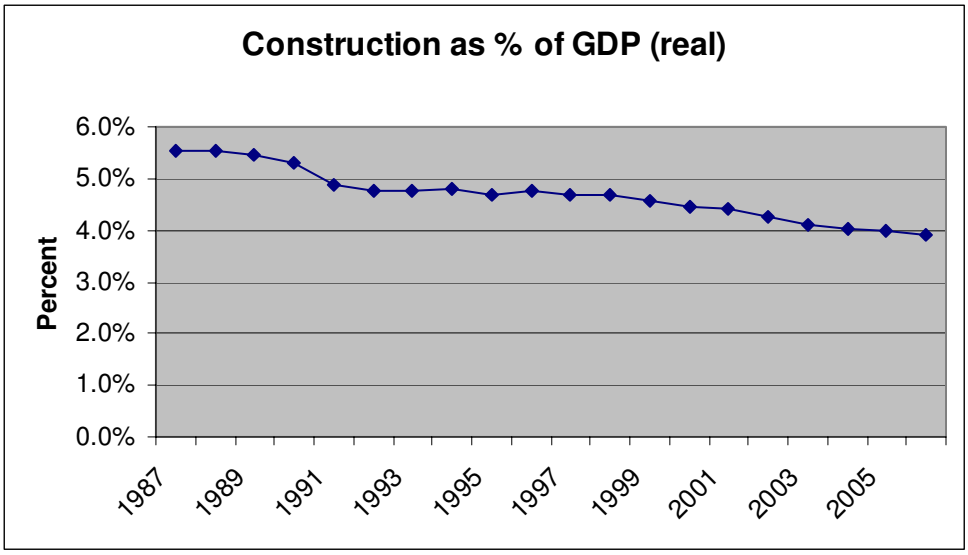
In general, the performance of the construction industry mirrors that of the overall performance of the economy (represented by the GDP). Construction experienced significant growth – from $35 billion in 1987 to almost $448 billion in 2006. But its expansion was not nearly as rapid as the growth of the national economy.



Source: www.bea.gov/bea.gov/industry/gpotablrs/gpo_action.cfm

[16] The Gross Domestic Product (GDP) is the total dollar value of all the goods and services produced in a given year. The GDP quantifies the performance of the economy. A rising GDP from year to year is considered beneficial in so far as it indicates an increase in output, and, thus, economic growth.

As a result, although the construction industry remains strong, its contribution to the overall GDP of the U.S. has declined slightly – from about 5.5 percent of GDP in 1989 to around 4 percent today.



Source: same as for previous graph.

The Cyclical Nature of the Employment in the Construction Industry

The demand for construction workers is relatively stable. For the last 20 years, even as the industry's relative share of the overall economy has declined, construction industry employment has continued to grow, both nationally and in New York State. [17]

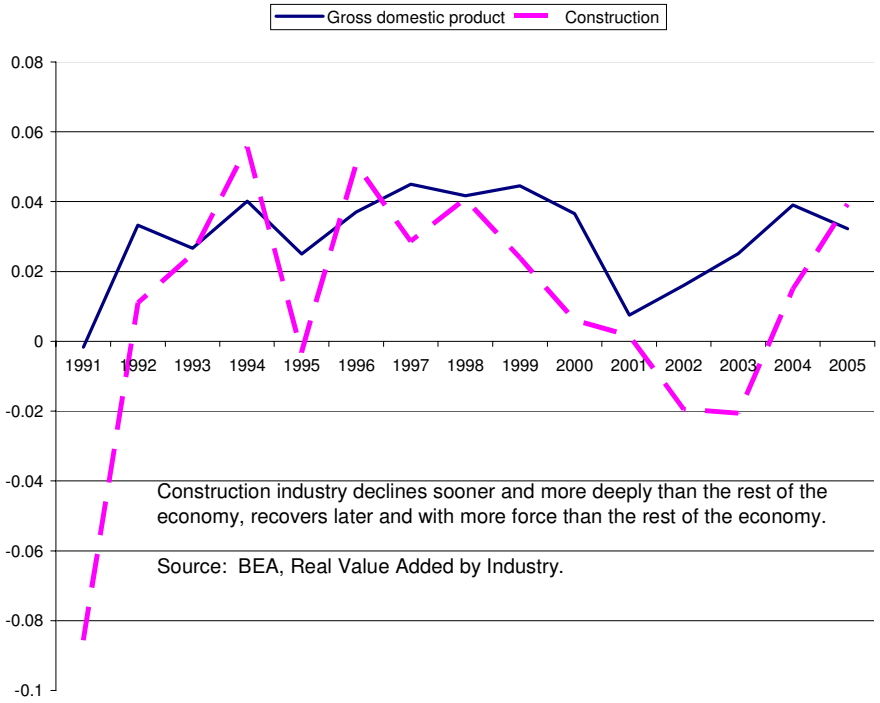
Table 22: Number of Employees in Construction

	1998	2000	2003	2005
United States	5.8 million	6.6 million	6.4 million	6.8 million
New York State	272,118	317,993	307,202	308,934

Source: U.S. Census Bureau, County Business Patterns , www.censtats.census.gov

However, while the construction industry is remarkably stable over the long term, it is also remarkably unstable in the short –term, especially during periods of economic adjustment. When the economy contracts, the construction industry contracts earlier and more quickly; and when the economy recovers the construction industry starts its recovery later, though it grows at a faster pace. [18]

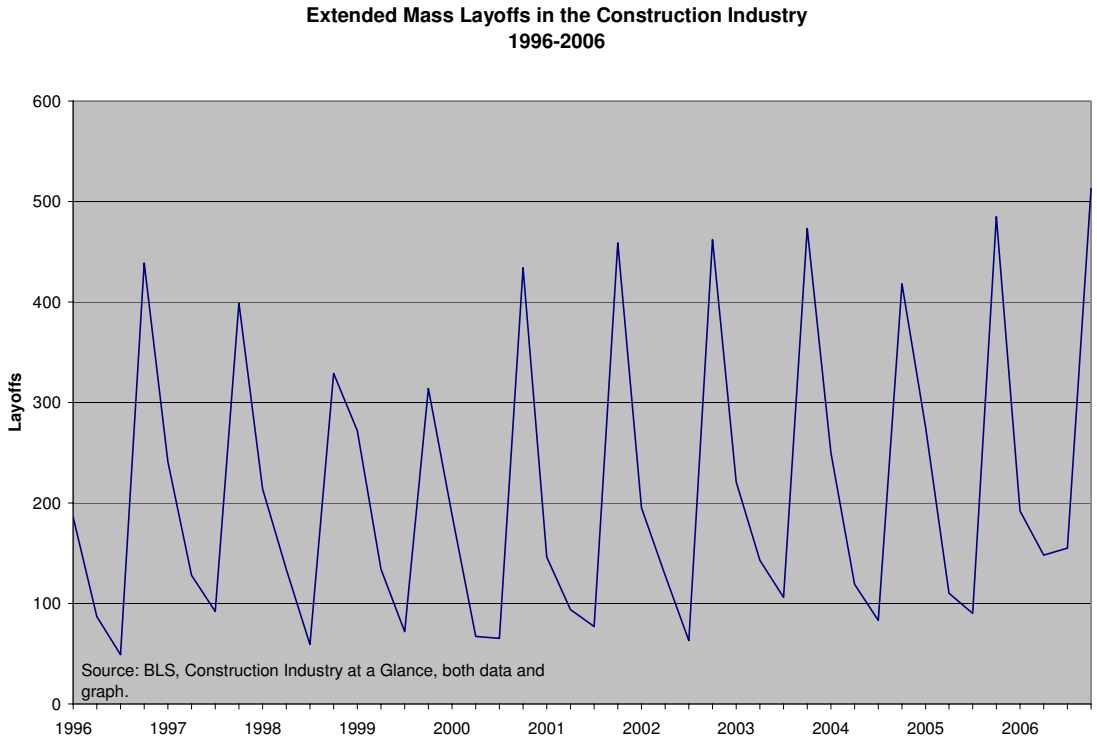
Percentage Growth in Value Added, All Industries, Construction, 1990-2005



[17] Measured in 2000 chained dollars.
[18] Data and graphs for value added growth and layoffs prepared by Moshe Adler.

Workers in the construction industry are therefore buffeted even more than workers usually are from gyrations in the economy

In addition, construction work is very seasonal. As the graph below illustrates, most layoffs in the industry occur in the fourth quarter of each year (between October 1 and December 31).



(An "extended mass layoff" is one that lasts at least 31 days and involves 50 or more individuals from a single establishment who file initial claims for unemployment insurance during consecutive 5-week periods.)

The Structure of the Construction Industry

With more than 6 million workers employed in the industry's over 780,000 firms, the construction industry is characterized by terms such as "fragmented," "diverse," and "change." These terms are evident in Table 23.

Fragmentation. As the table shows, the industry is populated both by very large contractors employing thousands of people as well as small shops employing one or two people. The construction of a multimillion-dollar office building can have workers employed by huge contractors side by side with small-scale specialty projects performed by a one- or two-person shop. Yet all these workers, employed under very different circumstances, are in the same industry.

Table 23: Establishment Size in the Construction Industry 2005

Employees per firm	Estimated Number of Employees/firm	Number of Firms	Total Employees
1-4	1.6	512,937	820,699
5-9	6.5	130,571	848,712
10-19	13.3	76,392	1,016,014
20-49	29.5	46,331	1,366,765
50-99	67.6	13,430	907,868
100-249	145.4	6,188	899,735
250-499	336.9	1,340	451,446
500-999	659.5	366	241,377
1000+	2,510.5	117	293,729
Total		**787,672**	**6,846,345**

Source: http://censtats.census.gov/cgi-bin/cbpnaic/cbpsel.pl

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Diversity. The construction industry is also characterized by a diversity of markets. Table 24 includes only those establishments and firms with payrolls. However, the construction industry has a vast number of shops without payrolls, which are not atypical in this industry. These tend to be the self-employed individuals or partnerships that have not incorporated.

In 2005, for example, while there were, as the table shows, over 787,700 establishments with payrolls, there were also over 2.3 million establishments without payrolls.[19]

Following the patterns of the industry as a whole, New York State in 2005 had 46,448 establishments with payrolls and over 104,000 without payrolls.

[19] www.census.gov/epcd/nonemployer/2004/us/US000_23.HTM. Figure is for 2002, most recent available data.

As Table 25 shows, self-employed workers are not distributed evenly across the construction industry. Instead they are concentrated in certain trades. Thus, whereas nearly one-half of all painters and paperhangers were self-employed, only 4 percent of all electricians worked for themselves.

Table 25: Percent of self-employed workers in selected construction trades in 2004

Occupation	Percent self-employed of total occupation
Painters and paperhangers	46%
Carpet, floor & tile installers & finishers	42%
Carpenters	33%
Brick masons, block masons & stone masons	30%
Roofers	25%
Drywall, ceiling tile installers & tapers	22%
Pipelayers, plumbers, pipefitters & steamfitters	13%
Insulation workers	10%
Electricians	4%

Source: Bureau of Labor Statistics, "The 2006-07 Career Guide to Industries," www.bls.gov/oco/cg/print/cgs003.htm

Change The increasing presence of national and multinational corporations is changing the nature of the industry. Even though the number of small shops remains about the same, their employment share has dropped dramatically.

Thus, the number of firms employing 100 to 1000+ employees has grown only slightly, from 0.67 percent of all firms in 1993 to 1.5 percent in 2005. But the employment share of these large firms has increased from 20.3 percent to 27.6 percent. Meanwhile, the share of the smallest firms—those that employ fewer than 10 workers—fell from 29 percent of total employment in 1993 to 9.4 percent in 2005. [20]

[20] Gerald Finkel, *The Economics of the Construction Industry*, M.E.Sharpe, New York, 1997, Chapter 3, "An Industry Overview," Table 3.1 for 1993 figures.